

COMMENTARIES IN CULTURAL ENTOMOLOGY

3. AN ENTOMOLOGICAL EXPLANATION OF EZEKIEL'S WHEELS?¹Charles L. Hogue²

A category of aberrant angels was created when the Hebrew prophet Ezekiel recorded his vision of four cherubim by the Chebar canal in Babylon during his exile there around the year 592 B.C. (Holy Bible, Ezekiel 1: 1-28). These heavenly creatures, said to be manlike, were hardly described as such. In their depictions of Ezekiel's vision through the centuries, artists have had to employ considerable license in anthropomorphizing "four-winged, four-faced spirits with eyes over their entire bodies" (Figs. 1 a-b). Only in the twentieth century did an entomologist suggest an alternate explanation of the nature of the cherubim.

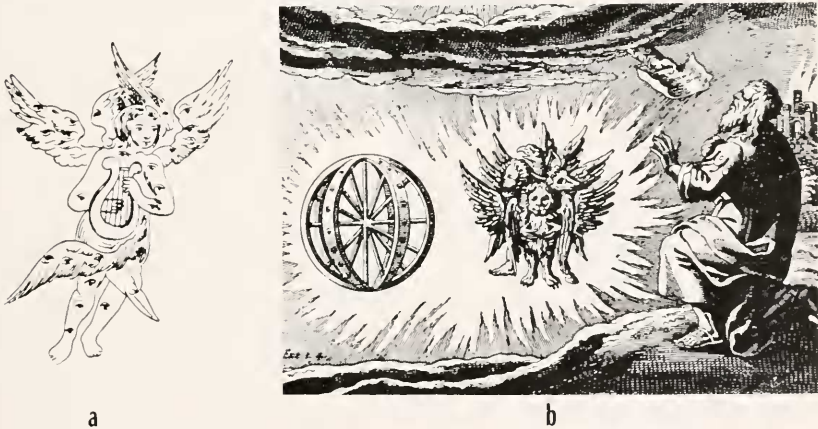


Figure 1. Artists' impressions of Ezekiel's vision. Fig. 1a. Eyed cherub [p. 35, fig. 21 from E. Schimitschek, 1968. *Insekten als Nahrung, in Brauchtum, Kult und Kultur*, In J.C. Helmcke et al. eds., *Kukenthal's Handbuch der Zoologie* (2 ed.) 4(2) 1/10: 1-62, after G. Eicke, 1964. unpub. seminar report, Forstl. Fakult. Univ. Göttingen]. Fig. 1b. Ezekiel and his vision (p. 125 from W.L. Phelps, 1933. *Matthew Merian's Illustrated Bible*, William Morrow, New York, after W. Merian, 1650. Bybel Printen, Amsterdam.

In his little book on the relationships of beetles and human history, "Aus der Käferwelt," Karl Sajó (1910) offered the idea that Ezekiel actually recounts an eclectic image of scarabaeine and coprine dung beetles

¹Received November 2, 1982. Accepted March 5, 1983.

²Entomology Section, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, California 90007.

and their habits; that is to say, the prophet envisioned a montage of the several deified species known in Egypt and the Middle East, namely *Scarabaeus sacer*, *S. variolosus*, *S. cicatricosus*, *S. puncticollis*, *Kheper aegyptiorum*, *Gymnopleurus flagellatus*, *Copris hispanus*, and *Catharsius sesostrus* (Bodenheimer, 1928:111, species added by me) (Fig. 2). It is

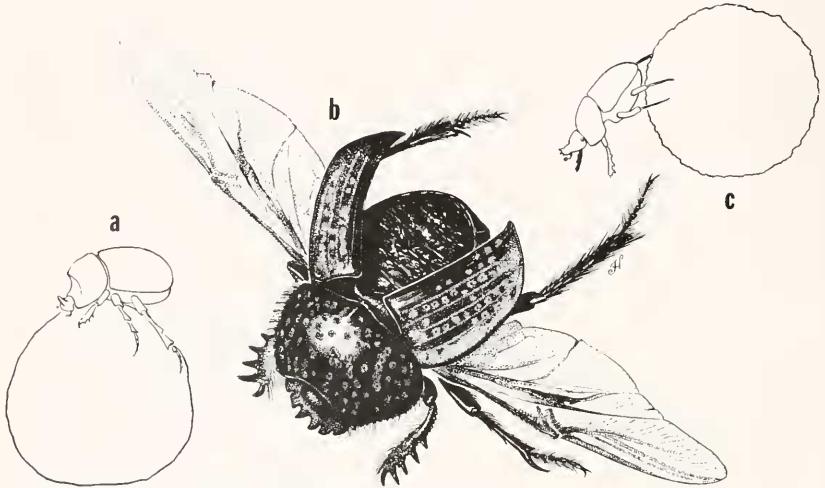


Figure 2. Three scarabaeines and coprines deified in the Middle East during ancient times. Fig. 2a. *Copris hispanus* brooding dung ball. Fig. 2b. *Scarabaeus cicatricosus* in flight showing salient features discussed in text. Fig. 2c. *Kheper aegyptiorum* rolling dung ball.

reasonable to assume that, as a priest, Ezekiel should be intimately aware of such beetles and their habits because of the prominent religious status they held at the time in area culture. Indeed, the ball of dung rolled by these beetles symbolized the sun to the ancient Egyptians whose political influence extended through much of the Middle East (Weise, 1927).

Sajó (p. 50) briefly justifies his conclusion on the basis of physical clues to the identity of the cherubim as scarabs as well as apparent etymological similarities between names for beetles and the word "cherub" (Heb. k'rubh, k'erubh, kerüb).

He mentions the obvious references in the Biblical text to beetle elytra and flight wings (paraphrasing the Lutheran translations of parts of verses 5-11 in Chapter 1 in the Heilige Schrift): "Sie waren Tiergestalten und ihre Flügel gingen oben auseinander; durch zwei Flügel berührte eines das andere und zwei Flügel bedeckten ihre Leiber." ("They were animal-like and their wings went out above from one another; by two wings they touched one another and two wings covered their bodies.") He is further convinced by the implications of verse 12 in the 10th chapter that the "eyes" covering

the cherubim bodies are equivalent to the pits found on certain *Scarabaeus*, especially *cicatricosus*: "Und ihr ganzer Leib, Rücken, Hände und Flügel, . . . waren voll Augen um und um; . . ." ("And their whole body, backs, hands and wings, . . . were full of eyes all around; . . .") Further, because he considers as cognates the Semitic k'rubh (cherub) and various Aryan words for beetle and like animals, *Skarabaeus*, *Carabus* (Latin, beetle), *Kerb*, *Kerf*, *Käfer* (German, beetle), there is an etymological argument for the beetle nature of the cherubim as well (Sajó, 1910:47f).

Even if they are familiar with his argument, however, it is unlikely that biblicists would be convinced by Sajó's explanation of Ezekiel's cherubim as non-human forms. Haran (1962), for example, stresses the variability of their form, which, though composite, is definitely human in shape and not comparable even with the fictitious griffin or similar Mesopotamian mythical creatures. Greenberg, a linguist to whom I introduced Sajó's ideas, also disagrees with Sajó's etymological argument. He believes "kerüb" relates the Akkadian "karību," a protective genius, to a basic quadriped form, like the griffin of Greek and Mesopotamian mythology but generally follows Haran's views on the humanoid nature of the cherubim. He summarizes (Greenberg, 1980), ". . . nothing either in the texts or in the iconography of ancient Israel, or of the contexts in which the Akkadian supposed cognate appear, lends the slightest support to the view that there was anything beetle-like about the cherubs . . . I am not surprised, then, that no one, to my knowledge, has taken up Sajó's notion."

It would seem fatuous, therefore, to debate Sajó's ideas with Bible scholars. Yet, like Sajó, I am an entomologist intrigued with the possible connection between Ezekiel's cherubim and beetles, and therefore, reintroduce the issue here as one of interest to readers concerned with cultural entomology (Hogue, 1979).

In reviewing the current English versions of the Old Testament (King James-KJ, Modern Language-ML, Living Bible-LB, Revised Standard-RS, New American-Standard-NAS and Jerusalem Bible-JB), I have found considerable support for Sajó's thesis from the descriptive standpoint, allowing for imprecise and varied interpretations of the original language, redactions, and the non-scientific background of the original authors. The text of the LB is expressed in a language most closely approximating contemporary English, and I shall quote it below as the primary source for discussion.

Cherubim figure prominently in both the first and tenth chapters of the book, but the account presented in chapter one is probably closest to the original (Irwin, 1943). The first pertinent verses are 5-6, "Then from the center of the cloud, four strange forms appeared that looked like men, except that each had four faces and two pairs of wings!" The "four faces" I shall take up below (when detailed in verse 10); the four wings, of course, are typical of Coleoptera and insects in general. Verses 7-9 describe

anatomical details: "Their legs were like those of men (i.e. jointed), but their feet were cloven like calves' feet . . ." The latter phrase could be a reference to the bifid tarsal claws; but a more likely reference, because Ezekiel presumably had no magnifying lens, is to the forked outline of the apex of the mid and hind legs produced by the elongate apical tibial spine diverging from the tarsus itself and easily seen with the naked eye. Verse 7, continues, ". . . and shone like burnished brass." (copper, bronze?) a possible allusion to the dull metallic greenish or coppery sheen of various species, such as *Kheper aegyptiorum*.

In verse 8 he says, "And beneath each of their wings I could see human hands." By "beneath" he could have meant either *below* or *on a lower level*. In the former case he may have been likening to hands the hind wings with their heavy, articulated veins radiating finger-like from the base; in the latter case, his reference may have been to the five-pointed ("fingered") tibiotarsi of the front legs, which can be seen easily from above.

The beginning of verse 9 suggests a physical impossibility if, indeed, beetles are being described. "The four living things were joined wing to wing . . ." This reference, however, is expanded upon in the 11th verse, "Each had two pairs of wings spreading out from the middle of his back. One pair stretched out to attach to the wings of the living beings on each side, and the other pair covered his body." Since I doubt that beetles or angels would find it possible to fly in this manner, I believe that the central portion of verses 11 and 9 could mean what the rest of verse 11 explains, simply that there were two pair of wings basally attached to the body, one pair of flight wings and a second pair of protective elytra.

The remainder of verse 9 reads, ". . . and they flew straight forward without turning." Verse 12 repeats this, "Wherever their spirit went they went, going straight forward without turning." The flight of scarabs, though deviating at times, is forceful and persistent, and often directional (Halffter and Matthews, 1966:90-91).

Verse 10 is symbolic, based, at least in part, on scarab anatomy, "Each had the face of a man in front, with a lion's face on the right side of his head, and the face of an ox on his left side, and the face of an eagle at the back of his head!" The large lateral eyes, and rounded clypeal corona seen from the underside of the head explain the first reference; the last easily derives from the horn on the back of the head of *Copris* and certain *Catharsius*, which resembles an eagle's beak. The remaining two views might be imagined from material aspects of any of the beetles and more likely are absolute symbols to complete an ancient Mesopotamian allegorical animal tetrad, possibly the four leading deities of Babylon: Nabu, the human-faced revealer; Nergal, the lion-faced god of the netherworld; Marduk, represented by a winged bull; and Ninib, the eagle-faced god of hunting and war or are from figures in Solomon's Temple (Layman, 1971:414; Pfeiffer and

Harrison, 1962: 710). Finally, the flashing colors of some species and darting flight are reiterated in verses 13 and 14, "Going up and down among them were other forms that glowed like bright coals of fire or brilliant torches, and it was from these the lightning flashed. The living beings darted to and fro, swift as lightning."

Two points about flight are added in verse 24, "And as they flew, their wings roared like waves against the shore . . . When they stopped they let down their wings." Scarab wings make loud buzzing noise in flight and are carefully folded at rest.

Sajó fails to follow with what I can suggest to be even more exciting imagery in continuing verses of chapter one describing the vision of the wheels. "Ezekiel's wheels" have puzzled biblical scholars and religious artists perhaps even more than the nature of the cherubim themselves (fig. 1b).³ Assuming the correct precedence of the scarab as a model for the cherub, would it not be logical to assume that the wheels were originally not such at all but the round dung balls fabricated by and closely tended by these beetles (Fig. 2c)?

The possibility of equivalence of the scarab ball and the wheel symbol is suggested by the equation, dung ball = sun (Egypt) = winged sun disc (Egypt-Assyria) = solar wheel (Assyria) (Goldsmith, 1929:81-83, 93-94). Several points of comparison, from additional text in chapter 1, also relate the "wheels" to dung balls: Verse 15 says, "As I stared at all of this, I saw four wheels *on the ground* beneath them, one wheel *belonging* to each." I add the emphases in this passage to stress the fact that dung balls are rolled on the ground and that each has a definite beetle "owner."

In verse 16 the color and basic structure of the wheels (balls) are described, "The wheels looked as if they were made of polished amber (other versions read, color of beryl-KJ, NAS, tarshish stone-ML, chrysolite-RS, JB) and each wheel was constructed with a second wheel crosswise inside (footnote, "Literally, a wheel within a wheel . . ."). the color comparison to "amber" is not entirely explainable but, dull or olive green are compatible with the muddy green of balls made from fresh bovine dung, although the soil-smearred balls of some may take on a yellowish color upon drying. The other color comparison might have been inspired by the blue-green and blue glazes applied to scarab amulets so common at the time. The LB translation adds the word "crosswise" to the description of the wheels' construction; the other versions merely mention "wheels within wheels," an arrangement easily compared to the layered structure that these balls may assume from the packing and rolling activities of their beetle makers (Klemperer, 1982a:79; Halffter and Matthews, 1966).

³Interpretations even include "flying saucers" (M. Sachs. 1980. The UFO Encyclopedia. Perigee Books, New York).

Verse 17 relates the ability of the "wheels" to ". . . go in any of four directions without having to face around" a natural capability of a rolling sphere as opposed to a flat wheel.

Verse 18 is incomplete and inconsistent with the fuller corresponding verse 12 of the repeated account of the nature of the cherubim and wheels in Chapter 10, "The four wheels had rims and spokes (some translators note confusion in the earliest Hebrew manuscripts at this point) and the rims were filled with eyes around their edges." Here too the LB is also incomplete and we fall back to the KJ version, "And their whole body, and their backs, and their hands, and their wings, and the wheels, were full of eyes, round about, even the wheels that they four had," which clearly indicates that the cherubim were eyed all over (as were the wheels?).

This is a very telling verse in its reference to such a bizarre feature as eyes on the corpus and wings of the angels. Yet certain scarabs of the region (e.g. *S. cicatricosus*) display diffuse oval punctae or elliptical depressions over the entire body which could appear to the purblind, lay viewer as eyes. In fact, this large type of puncture is described by beetle anatomists as "ocellate" or "ocellé" (Janssen, 1940:9). Many depictions of cherubim show eyes dispersed over the body (Fig. 1a).

It is reasonable to assume that the reference to eyes on the wheels (balls) is an embellishment and pseudepigraphon of the author of Chapter 10, who most likely was a later editorializer of a single original account of the nature of the animal forms and associated structures (Irwin, 1943), although he may be preserving a notation lost from the primary narration.

In verses 19-20 there is a statement about the control of the "wheels" by the cherubim, "When the four living beings flew forward, the wheels moved forward with them. When they flew upwards, the wheels went up too. When the living beings stopped, the wheels stopped." This is a plausible description of the purposeful rolling of the dung ball by the scarabs. (I cannot explain the rising of the balls with beetles in flight, however.)

Verse 21 ascribes the "spirits" of the living beings to the balls, "For the spirit of the four living beings was in the wheels. . ." could the "spirits" be the larvae or pupae of the beetles? The idea is consistent with the correlation made by early Egyptian scarab cultists between the metamorphosis of insects and the birth (egg), life (larva), death (pupa) and resurrection (imago) stages of human life (Harpaz, 1973:23).

The remaining verses repeat earlier passages in the chapter, except verse 26, which in part gives another clue to the natural basis of the vision, "For high in the sky above them was what looked like a throne . . . , and upon it sat someone who appeared to be a man." The basis of this imagery might lie in the habit of some scarab females to remain atop the dung ball brooding it and keeping it upright during the period of larval development. This

behavior is best developed in *Copris* (Klemperer, 1982b) (Fig. 2a), but *Scarabaeus* can assume a position atop its ball for short periods as well. Of course, Ezekiel would have had to had special knowledge to know this for *Copris* since brooding occurs only in vaulted underground chambers. But such knowledge could have been common among priests of the time who surely studied such an important animal assiduously. (It is interesting that the ML uses the term "vault" to describe the place occupied by the man on the throne.)

Other references to cherubim (Genesis 3:24, Exodus 25:18, II Samuel 22:11, I Kings 6:23, Revelations 4:6, 7) doubtlessly are to separate prototypes and are not necessarily equal to those in Ezekiel's portrait.

Therefore, altogether, we have an elaborate imagery consistent with a natural phenomenon. The etymological questions remain unresolved. If the Semitic and Aryan words equated by Sajó are indeed true cognates or others found to relate beetles to cherubim, our argument is strengthened, especially if they have known religious significance, e.g. Kheper (Egyptian, to exist, the Father of the Gods, Creation), corpus (Latin, body, vehicle of our earthy existence, predecessor of the soul) (see Sajó, 1910:49). That cherubim were scarabs is, of course, not provable; and since it deviates radically from traditional explanations, Biblical scholars, theologians and Fundamentalists will probably find ludicrous the suggestion that Ezekiel's cherubim and wheels were based on his supposed experience with dung beetles. However, the naturalistic method in Bible exegesis is as valid as any and has a basis in logic and history unlike most canonical, theosophic analyses, and surely represents as parsimonious an approach as literalism since it answers more, and raises fewer questions. Without facts to follow, attempting to reconstruct what influenced the mind of authors in antiquity can never be more than speculation; but from their writings, however fragmented and edited, basic ideas often shine through. Thus it would appear to me that whoever recorded the original of the story before us in Chapter 1 was a holy man of the seventh to sixth centuries with personal experiences and priestly training in Judea and Babylonia where the theophany of scarabs was understood, if not firmly believed and taught, as in proximate Egypt. The prophet appears to have been trained in this cult and possibly a direct observer of the events of scarab life.

ACKNOWLEDGEMENTS

I would like to thank Dr. W.D. Edmonds, scarabaeid specialist at the California Polytechnic University, Pomona, and Jay Bisno of the Archaeology Section of my own institution for criticising preliminary versions of this paper and assisting with technical and linguistic matters. Much appreciated also are the many fine suggestions for improvement of the manuscript provided by Dr. D Keith McE. Kevan, of McGill University and the review of the

final draft by Dr. Edgar N. Raffensperger of Cornell University. The cooperation of the foregoing individuals does not necessarily imply agreement with the ideas presented.

LITERATURE CITED

- Bodenheimer, F.S. 1928. *Materialien zur Geschichte der Entomologie*. Junk, Berlin. vol. 1, x, 498 p.
- Goldsmith, E. 1929. *Ancient pagan symbols*. G.P. Putnam's Sons, New York. xxxvi, 220 p.
- Greenberg, M. 1980. Personal communication, letter of 16 January 1980, 1 p.
- Halfpter, G. and E.G. Matthews. 1966. The natural history of dung beetles of the subfamily Scarabaeinae. *Folia Entomologica Mexicana* 12-14: 1-312.
- Haran, M. 1959. The ark and the Cherubim: Their symbolic significance in Biblical ritual. *Israel Exploration Journal* 9:30-38, 89-94.
- Harpaz, I. 1973. Early entomology in the Middle East, pp. 21-36 in R.F. Smith, T.E. Mittler and C.N. Smith, 1973. *History of entomology*. Annual Reviews Inc., Palo Alto, California. vii, 517 p.
- Hogue, C.L. 1980. Commentaries in cultural entomology. 1. Definition of cultural entomology. *Entomological News* 91: 33-36.
- Irwin, W.A. 1943. *The problem of Ezekiel; An inductive study*. Univ. Chicago Press, Chicago. xx, 344 p.
- Janssens, A. 1940. *Monographie des scarabaeus et genres voisins*. Mémoires Musée Royal d'Histoire Naturelle de Belgique, Ser. 2, fasc. 16, 1-81 p. 3 pl.
- Klemperer, H.G. 1982a. Normal and atypical nesting behaviour of *Copris lunaris* (L.): Comparison with related species (Coleoptera, Scarabaeidae). *Ecological Entomology* 7:69-83.
- Klemperer, H.G. 1982b. Parental behaviour in *Copris lunaris* (Coleoptera, Scarabaeidae): Care and defence of brood balls and nest. *Ecological Entomology* 7:155-167.
- Layman, C.M. ed. 1971. *The interpreter's one-volume commentary on the Bible*. Abingdon, Nashville. xiv, 1386 p.
- Pfeiffer, C.F. and E.F. Harrison. 1962. *The Wycliffe Bible commentary*. Southwestern Co., Nashville. xii, 1525 p.
- Sajó, K. 1910. *Aus der Käferwelt. Mit Rücksicht auf die Beziehungen der Kerfe zur menschlichen Kulturgeschichte*. Theod. Thomas Verlag, Leipzig. 89 p.
- Weise, H.B. 1927. The scarabaeus of the ancient Egyptians. *American Naturalist* 61: 353-369.

SMITHSONIAN INSTITUTION FOREIGN CURRENCY GRANTS PROGRAM

The Smithsonian Foreign Currency Program, a national research grants program, offers opportunities for support of research in Burma, Guinea, India, and Pakistan in the following disciplines:

1) Anthropology, Archeology and related disciplines; 2) Systematic and Environmental Biology; 3) Astrophysics and Earth Sciences, and Museum Programs.

Grants in the local currencies of the above listed countries are awarded in American institutions for the research of senior scientists. Collaborative programs involving host country institutions are welcome. Awards are determined on the basis of competitive scholarly review. The deadline for submission is November 1 annually. For further information write the Foreign Currency Program, Office of Fellowships and Grants, Smithsonian Institution, Washington, D.C. 20560, or call (202) 287-3321.